NS

ERATON

ENDERBY

LAND

1977

(2)

INDEX

24:7:77 Cont

Mt Cod R 4, 0995

Gage Ridge (E of 4 Mths)

(1) Massive robust chamockitic gneiss with garnet.

Pod of white ? enstatite rock
irregular schlieren of phlogopite /
sapphirine ? margin of same
layers, of coarser grained ? hypersthene /
sapphirine etc occurs — the
sapphirine becomes dark blue (Fe rich),
hypersthene is dark brown and ? quartz +
feldspar are present (? regmatitic veins)
? pale sapphirine
may be associated with enstatite
in the more part of the pod

4337 Massive garnet q/z feld gneiss
4338,9 White enstatite / sapph / phlog
4340 Phlogopite / sapphirine
4341-3 margin of pod with dark sapphirine /
? hypersthene / feld / ? quartz (regmatitic)

① Gage Ridge . E (near dyke)

Mt Cod RS, 1074

[redacted] Dip 270/20

Well layered gneiss —

with ga q/f feldsp, mafic pyroxene gneiss, aluminous metaseds, (blue) quartzite etc.

The garnet gneiss (q/f - rich) and blue-grey quartzite have thin conformable layers of sapphirine/garnet/sillimanite etc.

Local retrogression and deformation (particularly along dolerite dyke margin)

New lineation 210/15

Dyke trend 200 (sheared)

4344 Dolerite

4345 Mafic pyroxene gneiss

4346 Phlogopite pyroxenite. fresh

4347 (2 spec). blue qtzite ~~...~~ with gar/sap/sill layer

4348-50 Aluminous gneiss with gar/sill/sapp etc

② Cape [illegible]

4351 Banded pyroxene gneiss (? [illegible])
4352 Massive charnockitic gneiss

St Banded [illegible] gneiss (Pens— grey to white), major pyroxene [illegible] etc [illegible] luminous intercalated [illegible]. Dolerite dyke (1m) trends 340°. Some retrograded locally, and extreme deformation & st. shearing (apparently conformable) with foliation (200/60°). The gneiss adjacent to the dyke is bleached [illegible] with dark [illegible] and retrogressed; gneiss also tends to be pale in colour.

~~4353 Banded pyroxene gneiss~~
~~4354 Massive [illegible]~~

Pyroxene gneiss

Dip ~ 160/20

25/1/77

Base Mt King

10.45 am
−9°C

510 985

267.95 868.02

N Nunatak on NW side of Wyers Ice Shelf

Sample PK P10,0038

① Eclogite (2 pyroxene garnet rock)

Coarse grained

Eclogite pod 4353

4354 2 pyroxene garnet plagioclase rock

4355 Sapphirine / anorthosite / garnet rock from near margin of pod

4356 Pyroxenite

Country rocks are quartz / feldspar gneiss (well layered) with pyroxene and/or garnet. Also mafic pyroxene gneiss (some with garnet) and pyroxenite. Similar to Tonagh Island

Pkp 2 [illegible] 30

4

Zubchatyy Ice Shelf

Simpson Pk R7, 1268

Spot Height 213 (NW of 2 Miles N of

① Fyfe Hills)

Mostly rather massive reddish gneiss

Dip ~30° to ~~[illegible]~~ 250 (estimate only)

Cut by dolerite dyke. ([illegible] trend).

rather sheared and possibly

altered. Country rocks include

eclogite (clinopyroxene / garnet etc)

4357 Dolerite dyke

4358 massive reddish brown gneiss

with possible graphite

4359 Eclogite

Ward Rock (E end)

Reddish rather massive pyroxene qtz feld

gneiss and garnet quartz feldspar gneiss

Some [illegible] [illegible] [illegible] and

magnetite rich rocks.

Ultramafic [illegible] contains ~~[illegible]~~ no

garnet (~~[illegible]~~ eclogite ?) No.

4360 massive [illegible] gneiss

4361 ?? ~~[illegible]~~ pyroxenite (? eclogite)

26/1/77

McCod / Pn IS R 12, 2340

Mt McGhee - W side on top.

(2) Mod layered to massive reddish greens — much massive characteristic greyish green qtz feld greens [illegible] [illegible] [illegible] [illegible],

a little [illegible] greens and some massive grey quartzite layers (not [illegible] thick 1-3m)

Cut by dolerite dyke (apparently fresh.

4362 Dolerite dyke

Mt Renouard

ridge

Saddle area on N

McLeod N[illegible] R 11, 2358

(1) Purple, well layered, red [illegible] qtz, [illegible] [illegible] with v blue qtz [illegible] [illegible] layers [illegible] qtz feld [illegible], [illegible] [illegible] and [illegible] greens etc

Cut by dolerite dyke which appears to be rather altered (? [illegible])

Up above saddle [illegible] 040/15

4363 Dolerite dyke (altered)

(3) N of saddle through layered leucocratic, garnet qtz feld gneiss, massive red charnockitic gneiss, [illegible] [illegible] quartz layers and [illegible] [illegible] Dip ~ [illegible] ([illegible] [illegible])
<u>4364</u> massive charnockitic gneiss
The probably [illegible] [illegible] [illegible] discordant [illegible] [illegible] rather deformed ([illegible] [illegible] [illegible] [illegible] present in the [illegible] [illegible] [illegible])

<u>Ntk 4mls SSW of Mt Renouard</u>

(4) Steeply dipping (310/80) well layered [illegible] leucocratic ga qtz feld gneiss with [illegible] qtz feldspar and layers [illegible] granulitic [illegible] + massive grey (and [illegible]) [illegible] of feldspar [illegible] + [illegible] mafic [illegible] gneiss and [illegible] [illegible] gneiss
Similar to Renouard [illegible]
The layered gneiss is folded ✓

with tight to isoclinal intrafolial
and microscopic folds, boudinage
structures etc

4365 Massive charnockitic pyroxene granulite
gneiss

Some of the garnet pyroxene gneiss
has pale blue [illegible] yellowish
qtz [illegible] [illegible] and [illegible]
Banding on a [illegible] [illegible] rather
irregular

Sand R1/2315

Sandercock Ntks — 5 rks

(1)

Baro	1185	510	17.38
	753.58	753.45	−12°C

Reddish weathering, coarse grained
porphyritic biotite granite
Feldspars are white on fresh surface
and up to 2 cm (max dia)
Biotite occurs in aggregates — somewhat
similar to granite at Mt Bride
A slightly finer grained variety — ∞

reddish and has a speckled appearance in outcrop.
Xenoliths are present but are not abundant and strong shearing and mylonitization is present locally.
4366 Reddish biotite granite
4367 White coarse grained porphyritic biotite granite.

Martha rock — SandTie RB/2324

Beryl 510 985 18.38
7R3-18 7S5-10 −14°C

(5) Mainly biotite granite, similar to last locality — but much deformation locally extreme shearing (& mylonitization) — augen gneiss and el. foliated granite (most of the area is more or less deformed. Color is white to reddish. Thin pink aplite (5-10 cm) veins and white biotite pegmatites (15cm) and quartz veins.

4368 Foliated, porphyritic biotite granite

4369 Augen gneiss (strongly deformed) [illegible] biotite

4370 Aplite vein

The deformed rocks have a marked lineation [illegible]
[illegible]
[illegible] present.

Main NEK

③ Loro 2 · 985 510 20.25
[illegible] 62 745·52 −16°C

V. massive, not foliated garnet and biotite gneiss. Much of ~~porphyritic~~ porphyroblastic (feldspar augen laths up to 1 cm in length).
A little [illegible] grained [illegible] green [illegible] is also present.

⑥ The small hill 2 miles ESE of
is similar very massive grey
garnet biotite gneiss
4371 In most gneiss (small hill)
4372 In 'knot' gneiss (main hill)
The gneiss is very massive and
may be intrusive. It may have
been modified by the nearby
granite intrusion. (Are the
[illegible] joint deformation or two
deformations? — they think the former is
[illegible]).

27/1/77 Simpson Pk R 7, 1268

Khmara Bay NE group of Ntks – N point

(2)

Mod. well layered acid to basic pyroxene granulite (no granophyre seen) + minor pyroxenite

Dips at N side of outcrop 190/vert (100 strike), at S side of outcrop – 210/80

The pyroxene granulite has some leucocratic (pyroxene poor qtz feld) but there is not very much change of grain size with pyroxene content. The more mafic layers are more homogeneous, and are paired than the acid layers. The granulite are cut by a dolerite dyke trend ~240°

4373 Dolerite dyke

4374 Acid pyroxene granulite (2 pieces)

4375 Mafic pyroxene granulite

Simpson Pk R 7, 1270

(1) SE group of Ntks – just W of large dome

V massive red pyroxene qtz feld granulite with some more mafic pyroxene layers, and also

magnetite-rich band.

The gneiss is mobilized with diffuse banding and some schollen blocks. Pegmatitic segregations (Q feldspar) are very common and are mainly conformable.

A doleritic dyke is discordant [illegible] deformed and [illegible] unfolded [illegible], [illegible] [illegible] the more leucocratic layers and schlieren. Garnet is locally present. The large dome is a granite intrusion (possibly charnockitic – from colour). A grey granite also appears to be intrusive, but relations not very clear – in some places it appears to grade into the country rock. Streaks/veins of similar material are present in the latter however.

Both granites are undeformed.

Dips, just to N of dome are 010/70, further to SW are 350/10

4376 massive charnockitic granite

4377 grey granite (could be an altered phase of above)

4378 massive pyroxene qtz fdd gneiss
4379 Metamorphosed dyke (2 pyx granulite)
4380 M/m dyke with garnets

A large, undeformed (green) 2 pyroxene qtz fldr
gneiss pegmatite — 3 ... occurs ... [illegible]
phenocrysts of feldspar up to 15 cms)

② W of 3 islands, 3 mls to W

V. Mafic 2 pyroxene - fldsp gneiss -
Some leucocratic (pegmatitic and granitic)
veins. Gneiss is massive
rather irregular banding - a
few pyroxenite [illegible] phenocrysts, +
garnet occurs locally, mostly
along veins (~10 cms or across) -
possibly an alteration (or deformation?)
effect.
4381 2 pyroxene bi fd gneiss
4382 Mafic pyroxene gneiss with
garnet

Islands to W   Simpson Pk R5, 14 38

mostly banded pyroxene gneiss (cf NE Chumara Bay N... [illegible] Is)

Steep dips

(1) N of 3 main islands is layered and banded pyroxene gneiss, with some coarse grained, pegmatitic garnet, qtz, feldspar gneiss (rather mobilized, [illegible] or [illegible])

One mafic gneiss layer could be a m/mdyke, but is not now discordant. It is very massive, however.

½ massive charnockitic pyroxene gneiss is also conformable

2 Pyroxene (green cpx, brown opx + plagioclase) - lenses are present in the gneiss

Sp H at 85°

4383 Pyroxene gneiss

4384 massive charnockitic gneiss

4385 mafic pyroxene gneiss

4386 Pyroxenite

Cross cutting shear zones and faults are very common here. They are mostly at [illegible] high angle to the banding

② Island NW of large island

Light banded gneisses, v. similar to Tornegal Is — massive charnockitic pyroxene gneiss, layered pyx gneiss, impure pyroxene gneiss, leucocratic garnet gneiss, well layered qz ± pyroxene gneiss etc (possibly not beds)

Pyroxenite pods also present.

NW cut by dolerite dyke (trend 340)

Dip 310/75.

4387 Dolerite dyke

4388 Massive pyroxene gneiss

4389 Garnet gneiss (+ biotite?)

The islands further west are mostly rather massive brown pyroxene gneiss (the Tornegal Is type?), with a few white pegmatites (cross-cutting, undeformed). The layering is very irregular, many tight fold noses, isoclinal (intrafolial) folds etc.

No basic dykes seen on these islands.

28/1/77

Newman Nteks U of 2 nr. 1181 (Summit)

Both massive reddish pyroxene qtz
feld gneiss with interbanded leucocratic
garnet gar qtz feld gneiss.
The layering is rather indistinct
(much more so than at [illegible] [illegible] etc.)

4390 massive, charnockitic pyx qtz feld
gneiss

Mt Kjerringa – main peak

mainly v massive dark purplish
? pyroxene qtz feld gneiss (part retrogressed
? (a [illegible] c.c.) Some fine grained grey
[illegible] mafic gneiss. A pod of
sapphirine, phlogopite cordierite in
[illegible] gneiss.

4391 massive acid gneiss.
4392 mafic gneiss (?)
4393 Sapphirine / phlogopite
4394,5 Sapph / phlog / cord ? etc

A layer of thin white, ultra-grained ([illegible] [illegible] garnet) gneiss contains, [illegible] of [illegible] [illegible] [illegible].

Ntk 4 mls S of Mt Kjerringa

Well layered gneiss, dip SW at 70, and [illegible] [illegible] [illegible] dykes ([illegible] deformed)

Aker Peaks – Spot Ht 1560

1. Massive red gneiss — charnockite. Dips difficult to determine. Gneiss looks fresh, in contrast with last locality.

4396 Massive charnockitic gneiss

Spot Ht 1600

Massive reddish gneiss cut by probable mafic dyke. A few lighter layers visible

Spot Ht 1490 is similar red gneiss.

Spot Height 1490 (K n° 2) S end

Massive red gneiss is apparently similar to last locality

4397 Massive charnockitic gneiss

4398 (2 pieces) charnockitic gneiss with rare garnets

4399 Retrogressed gneiss (pyroxene replaced by biotite etc)

Dip 315/60°

The gneiss is massive, but there are layers of [illegible] pyroxene etc

Garnet — present locally but does not appear to be very abundant.

Pegmatite layers and segregations (quartz & feldspar) quite common and are ~~fol~~ locally discordant.

The gneiss is grey or whitish.

Some layers of grey gneiss are retrogressed (pyroxene replaced by biotite etc). The feldspar becomes much lighter in colour (apparently due to alteration). Some pods & layers of pyroxenite are also present.

Spot Ht 1470

Red massive gneiss, poorly layered
Dip ~ W at 70°.

Jennings Bluff — ridge near summit

massive red-weathering charnockitic
gneiss. Dip indeterminate.
[illegible] massive charnockitic gneiss

Nicholas Range

Red massive charnockitic gneiss
[illegible] diffuse [illegible]
Occasional mafic layers are present.
Dip ≈ 290°/25.

Spot Ht 1140

Red massive charnockitic gneiss
with [illegible] other gneiss
(green in places, in others [illegible])
[illegible]
Dip ~ [illegible]/35
Gneiss is massive; poorly layered

Small NKK 2 mls NE of Spot Ht 1140

(near end on S side)

massive reddish charnockitic gneiss similar to last localities. Very [illegible] [illegible]

Some of the [illegible] irregular and cut by [illegible]. These [illegible] are irregular and discontinuous.

4801 massive charnockite

4802 [illegible]

[illegible])

Spot Ht 720 (7 mls NNE of [illegible])

Red massive gneiss, pink similar to last locality [illegible] [illegible])

Ntk 9mls SE of last (Flyspeck NSC)

Massive pyroxene gneiss — [illegible] ([illegible]) — lighter in colour than previous [illegible]
Some mafic pyroxene gneiss
Layers Dip 20/25
4803 Massive pyroxene gneiss

[illegible]

Spot Height 500 ([illegible] Rifiken)

Pyroxene gneiss — [illegible] mafic, but some acid gneiss. Cut by quartz veins and [illegible] veins. There is no very distinct foliation [illegible] [illegible] [illegible] has a [illegible] [illegible] direction.
4804 Mafic pyroxene gneiss

Rifiken 0°C 1815

Baro 265 750
970.05 969.48

Georges Islands (Edward VIII Gulf)

[illegible] main island

Very migmatitic biotite/garnet gneiss with abundant [illegible] mafics.

4805,6 Garnet biotite gneiss
4807 Biotite gneiss
4808 Mafic gneiss (pyx or amphibolite?)
4809 Mafic pyroxene granulite (? a [illegible] dyke)
4810 Vein of pyroxenite (pos. discordant.

The gneisses are lower grade than those to the ~~east~~ west — garnet and biotite are the usual mafic minerals in the gneisses ([illegible] [illegible] although amphibole &/or pyroxene [illegible] [illegible] in the mafics

Blocks of [illegible] to mafic gneiss are enclosed in a [illegible] ~~[illegible]~~, [illegible] [illegible] matrix

The whole complex looks

... [illegible] – migmatite [illegible] [illegible]
interbanded with complexly folded migmatite
gneiss – megacrystic [?] – dykes & [illegible]
highly variable. Shears common – & platy gneiss

<u>Georges Island</u> – S of main 2 island

4811 Massive leucocratic gneiss
4812 Qtz feld gneiss with [illegible]
4813 Metamorphosed basic dyke
4814 [illegible] dyke (? [illegible] [illegible] with
[illegible] of large feldspar grains
in central zone

Mostly rather leucocratic gneiss
with prob. biotite and possibly
garnet – less migmatitic than
other island but otherwise not
dissimilar. Cut by several
metamorphosed basic dykes (several
metres across) – rather speckled
appearance with large (white) feldspar
grains. N of main island looks
similar – N side is rather
migmatitic, like small island.
Some of the gneiss is very strongly

[illegible]

The dykes are little deformed, but possibly sheared locally. They ~~are~~ often out of place in the dyke.

~~[illegible]~~

Pegmatitic rocks are (small) developed containing biotite, possibly magnetite, quartz and feldspar. Garnet is quite abundant locally in the gneisses. Pyroxenite(?) is also present (in the vein or large) The feldspar in all the rocks are white – there is no dark coloured feldspar of charnockite.

) Plushnaya Nkk end of NE ridge

Baro 11.42 —10°C

265 750
821.43 821.30

Mt Sibiryakov ~~[illegible]~~ (E Nkk)
Simpson Pk R9, 0164

① Rel. low grade migmatitic gneisses (similar to Nye Mts etc)
Massive, cl foliated acid gneiss with biotite ~~and~~ ± garnet is probably intrusive, although it is locally deformed. A large area of massive biotite rich rock may also be an altered intrusive.
Layered migmatitic gneisses include biotite, garnet/biotite gneiss. Mafic layers are ~~[illegible]~~ hornblende rich or ? amphibole [pyroxene not identified but may be present].
• The gneisses include many pegmatitic segregations and layers many of

and unaligned granitic layers
and coarsely foliated gneiss layers
are also present.
Minor intrafolial and plastic folds
are also common. Shear zones
are abundant and are both concordant
and discordant.
1) mafic dyke is discordant, but
deformed and metamorphosed.
Cross cutting pink biotite pegmatites
are present, and some are deformed
(others cut deformed pegmatitic
gneiss) They have xenoliths
of gneiss. Width from a few cm to metres
Dip 200/60
4601, 2 massive biotite ± garnet granite
(M. ~~[illegible]~~)
4603 Biotite rich acid ? intrusive
4604 metamorphosed dyke
4605 Mafic gneiss
4606 Granitic gneiss
4607 Biotite gneiss
4608, 9 Garnet biotite gneiss

[illegible] [illegible] pink granite intrudes the biotite rich intrusive and appears to be discordant. It is locally deformed.

<u>Simpson PK R8, 1208</u>

Mt Humble

about ½ way down

(1) mountain on ridge

Mostly red-weathering, rather massive Q/F feld gneiss with some coarse pegmatitic segregations cut by fresh dolerite dykes.
The dip is 020/75 — the steeply dipping gneisses are locally quite strongly deformed with development of much biotite.
The dolerites are quite fresh (there is no evidence of deformation in the dykes)

4610,1 massive charnockitic (? pyroxene) gneiss

4612 Deformed and gneiss with biotite

4613 Dolerite dyke

② SE end of inlet

Similar massive charnockitic gneiss locally deformed with extensive development of biotite. Ph. 005/75
Some undeformed qtz, feld pegmatite with pyroxene altering to ?biotite?/or amphibole (spec for XRD)
Cut by fresh dolerite dykes
A thin dyke is undeformed, but a 10m dyke is sheared at the margin (it looks fairly fresh, however)
Mafic 2 pyroxene granulite is also present
The charnockitic gneisses are generally rather altered — the colour is [illegible] purplish and the feldspars not as dark as usual.
4615 massive charnockitic gneiss
4616 mafic granulite

Dick Peaks

(253 15) air photo PK R? 182

① Steeply dipping massive and charnockitic gneiss with local deformation locally – development of biotite etc (The deformed rocks are quite fissile

Some grey rather altered rocks and some more mafic gneiss (quite massive here)

Cut by a massive dyke (lighter grey than most dolerites) – trend

340 Appears to be cut by a typical dolerite dyke (but relations not certain) Another fresh dolerite trends ~~Nw~~ 290°.

Most of the gneiss was originally massive – coarse grained pegmatitic lenses are common and the mafic content is fairly small

4617 massive charnockitic gneiss
4618 massive acid gneiss
4619 grey mafic dyke

Mt Dyke

Simpson Pk RB, 1213

(1) [illegible] reddish charnockitic gneiss
with minor mafic gneiss
Retrogression locally – often
accompanied by bleaching
The retrograde gneisses have
a well defined foliation and
there is extensive development of
biotite (and amphibole in the mafics)
Mafic dykes are noted
cleaved particularly at the
margins (the gneiss is also
strongly deformed here
4620 Massive charnockitic gneiss
4621 Pyroxene granulite

(2) Ntk 2mls W of Mt Dyke

4622 Massive charnockitic gneiss
4623 Retrogressed mafic gneiss (grey)
4624 Dolerite dyke

Mostly massive charnockitic
gneiss with some mafic xenoliths

[illegible] (more than [illegible]
[illegible]), light grey layers
and zones are interspersed
pieces ([illegible] → [illegible] etc)
Dips are moderate (~ 50°), directions
variable ([illegible] SE to NE mostly)
Dip near landing site is 130/30
A dolerite dyke (~ 20 m wide, across)
intrudes the gneiss. The dyke
is fresh and contacts appear to
be undeformed

30/1/77

Mt Hardy — W tip on beach!
Mt Rusier - Larsen R15, 0707

① Dip 190/25°
Rather massive, [illegible] migmatitic
and gneiss, pyx and [illegible] gneiss
Mixed coarse grained pegmatitic
layers and pods ([illegible])
Some mafic pyroxene amphibolite
layers and inclusions.
To S of beach massive feldspar-
pyroxene rocks (? anorthosite?)

The ?anorthosite is very massive with some mafic inclusions and pegmatitic layers. It is foliated

pyroxene. A more leucocratic variety is fine, even grained. Immediately underlying this are cream coloured sapphirine bearing rocks (the cleaver ~ 10m) — red light blue is dark blue sapphirine, pale milky quartz, cream feldspar and rounded hypersthene. Some layers are richer in hypersthene and have darker feldspar and quartz. Associated with the sapphirine bearing rocks are some layers with deep red garnet (leucocratic)

basic

A wide (25 m) dyke is relatively felsic (more feldspar than the average dolerite) with elongated phenocrysts of pyroxene (or amphibole). The dyke trends 040 and is massive and unfoliated — there is some

[illegible] granite, relatively well foliated gneiss with leucosome in shear zones).

A typical dolerite (black) bands 100's, but the relations between these and the other could not be seen:

4625 Mafic dyke
4626 Mafic dyke (fine grained)
4627 Garnet quartz feldspar gneiss
4628 Porphyroblastic pyroxene feldspar rock (? amphibolite
4629 Even grained, more melanocratic pyroxene feldspar rocks
4630_2 Sapphirine qtz feldspar rock
4633 Sapphirine qtz rock

-14°C

510 985

863.62 863.77

Maruff Peaks (Hansen MEF)

Base of cliffs rear NW end

Strongly layered brown and light coloured gneiss — rather contorted but generally steep dips (200/80) (Whiting NE generally similar ~ E-W strike)

Gneisses are garnet and biotite + qtz + feldspar.

Finer grained, relatively biotite (+ garnet) and gneiss is interlayered with leucocratic garnet/biotite gneiss and white garnet + qtz + feldspar gneiss. Some discordant pegmatitic veins with biotite + garnet

4634 Garnet biotite gneiss

4635 Garnet biotite gneiss with red-pink layer and white garn qtz feld layer

4636 Coarse grained massive biotite-garnet qtz [illegible] with brownish feldspar

[illegible] [illegible] [illegible] possibly be
inclusions, SW is a conformable
foliated layer.

Fram Peak

S end appears similar to Marruff
peaks, — st layered gneisses with
light + brown bands — much contorted
(tight folds etc). Cut by grey
basalt(?) dyke — discordant, but could
be metamorphosed. The northern (NE)
end has layers of massive red
gneiss — could be granitic veins, but
they are folded and presumably
metamorphosed. Dip is ~N at 45°.

Secluded Rocks

Highly migmatitic garnet (?diopside or amphibole)
qtz feldspar gneiss — numerous
pegmatitic layers and segregations with
inclusions and layers of finer
grained more mafic garnet/diopside?
and ?diopside gneiss.
X cutting pegmatites have similar

[illegible] layer ~ ½ in thick
is discordant on a gross scale, but conformable in detail.
It presumably represents a metamorphosed dyke although the contacts are gradational. The mineralogy is feldspar + ? amphibole.
Locally there are concentrations of epidote in the gneiss.
Undeformed Xcutting pegmatites (pink feld, qtz, garnet, ? biotite) are younger than the dyke.
Dip is roughly NE at 45°

4637, 8 Garnet ? diopside qtz feld gneiss
4639, 40 metamorphosed dyke (? amphibolite)

<u>Sroat Mountain</u>

Mobilised [illegible] qtz feldspar gneiss [illegible] rather irregular [illegible], [illegible] pegmatitic layers and [illegible] xenoliths [illegible]

[illegible] metamorphosed
[illegible] — on a large scale they
appear to be discordant.
Much of the [illegible] gneiss may
be intrusive, as it contains
blocks of mafic granulite.

4641 Acid pyroxene gneiss
4642 Pyroxene gneiss (? intrusive)
4643 Mafic granulite (probably
a metamorphosed dyke

12/1 [illegible]

[illegible]

510	985	10.44
861.63	861.86	−17°C

Tange R3/2153

Forefinger Point Islands [illegible]

①	985	510	−3°C
Barol	980.40	980.08	13.05

Strongly layered gneisses –
granitic gneiss (massive, [illegible]
deformed intrusive (?)), garnet qtz
[illegible], [illegible] felspar
[illegible], mafic gneiss (amphibolite or
[illegible]) [illegible]
and pelitic [illegible] —
[illegible] / gar / biot   cord / hypersthene (?) / [illegible]
etc.
Some pods (boudinaged (?)) [illegible]
? sulphide (?) [illegible]
[illegible], hypersthene (?), garnet
and biotite (?) [illegible]

4644 Garnet gneiss

4645 Biotite gneiss

4646 Magn' gneiss

4647 Pyroxenite

4648 Carbonate biotite gneiss

4649-55 [illegible] rocks

The rocks are cut by pink biotite pegmatite (unfoliated) & probably by pink granite (also sparse veins in pegmatite)

Outcrop N of Geoffrey Hills

Simpson PK R3, 1581, 1580

(1) Red massive [illegible] [illegible] with [illegible] layers of [illegible] [illegible] similar to E [illegible] hills [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] biotite pegmatite [illegible] [illegible] [illegible] [illegible] Dip [illegible]

Simp R4/1515

① Seaffrey Hills -

Baro 1 510 985 15.35
953.05 953.85 -200

41

[illegible]

[illegible] and [illegible] position (tight [illegible] and [illegible] folds) — particularly [illegible] to dyke margins, although some dykes are sheared out and disrupted (the 150° trend more [illegible] less deformed)

4657.8 massive charnockitic gneiss
465? Dolerite dyke

Nbk 5 Km WNW of Mt Yuzhnaya — [illegible] (near W side) **Smp R5/1418**

Baro 1510	985	16.49
① 968.45	968.70	0°c

Highly migmatitic garnet/biotite and garnet/bi/sillimanite gneiss.

V. irregular layering — contains numerous pink gt/bi and gt/bi pegmatite and white ga/biotite pegmatitic segregations — approaches [illegible] locally. The pegmatitic material is often pink [illegible]

[illegible]

[illegible] (with [illegible]) are
granulite with biotite) and pyroxenite
N. leucocratic, highly pink granite
is abundant and there are
more inclusions near the margins
of the mass.

Large X cutting pink biotite
pegmatites are also present.
Dip is highly variable, but
roughly 45° to   on the W side

4660 Pink leucocratic granite
4661,2 Garnet biotite gneiss
4663 Garnet biotite sill gneiss
4664 Mafic gneiss

The dips are variable in different
parts of the mountain, but are
mostly moderate to steep. The
W cliffs are [illegible] [illegible]
[illegible] [illegible] but are still
impassable [illegible] of the S [illegible]
[illegible]

Mt Lira

Dark pelitic gneiss
with sillimanite cordierite garnet, biotite
+/- hypersthene.

Dips to E at ~50°. Cut
by pink EW biotite pegmatite
and some thinner white to
pink pegmatites with cores of
massive quartz. These pegmatites
have biotite and large X.L.s of
cordierite.

4665 Garnet biotite sillimanite
cordierite gneiss

Mt King

Baro	510	985	21.33
	862.15	862.57	~13°c

Proclamation Island

brown

4666-72 massive charnockite gneiss from area between summit and SW end of island

4673-5 massive charnockite (purplish) gneiss from summit area.

4676 massive granite gneiss from near summit

The gneisses are cut by late qtz veins and pink pegmatites (+ opx ~~xxxxx~~)* Usually they are sheared and become quite strongly foliated in these zones. The pegmatites are apparently affected by at least some of the

[* Blue qtz, pink feld-par and black orthopyroxene]

shear and there is some alteration of pyroxene to biotite; however some of the pegmatites are relatively undeformed and cut the foliation in gneiss and are not themselves strongly deformed.

Vechernyy Hill — NE of melt lake, NE of main summit

Very massive biotite granite gneiss (pink) with rare garnets

Dip 010/60.

Cuts by 2 generations of pink biotite pegmatites (~NS late than ~EW)

4677, 8 massive biotite granite gneisses (NE of lake)

4679 Dyke from N of lake

4680 massive, more melanocratic biotite gneiss from S of lake

To the S of the lake, the gneisses are more melanocratic, with some compositional layering. They range from quite massive to quite strongly foliated.

Outcrops E of Hays Glacier

S Outcrop massive reddish brown gneiss
Dip to NW NNE at 60 to 20°. Cuts in
pink pegmatite
There is some layering apparent but
gneiss is generally massive
N Outcrop Similar, but dip is 60° to
NE Ridge both generally similar to Vecternys
Hill. No landing possible.

Outcrops on S side of Assender Glacier

Pt 010/65.
Rather weathered brownish gneiss
with pink massive biotite granite
gneiss in conformable layers (pink
foliated & banded) & less foliated
pegmatite layers and mafic ? pyroxene
granulite layers. Some pink
discordant (unfoliated) biotite
pegmatite - the pyroxene
either red or green or pink
retrogressed

[illegible]

[illegible]

strongly deformed - well deformed

migmatite - pegmatite veins (but (weak) pegmatites (NS, (brick-ssw trend) as well.

4681 Browned acid gneiss (? pyroxene or biotite)

4682 Pink granitic gneiss (biotite)

4683 Higher ? pyroxene gneiss.

Felton Head

Summit —

4684,5 massive charnockite garnet ? pyroxene granite

4686 Altered granite

4687 Later grey granite intrusive

Intrusive grey, [illegible] charnockite (with garnet [illegible] pyroxene) — rather coarse grained. Locally foliated and [illegible] (has a [illegible] colour). Both Felton Head and the outcrop [illegible] massive charnockite [illegible]

? rocks ... ? [illegible]

([illegible] qtz. feldspar).

There are also some veins (?) of grey granite. (but relations not seen in situ)

The outcrop 4 mls S of Feltan is v. massive brownish gneiss (or intrusive ?) – there are some mafic schlieren present. Also large shear zones and some possible [illegible] basic dykes.

The outcrop to the E (2 mls) is v. similar, but there is some compositional layering (it is still mostly very massive however). The small outcrops to the ~~[illegible]~~ east are all massive brown ? charnockite.

The rocks 2 ½ mls N.W of Waratah Island is also brown, v massive rocks, undeformed, cut by basic dykes and pink pegmatites. The outcrops between Waratah and this point are similar v. massive intrusive, but light coloured xenoliths (? [illegible] aligned.

Outcrop 1½ mls SW of Forefinger Point

(2)

Tonge from P 2,215

Dip 170/70
Lineation 100/50

4688 Mafic pyroxene granulite

4689 Biotite ? pyroxene gneiss

4690 Garnet biotite gneiss.

4691 Charnockitic gneiss (inclusion in massive, foliated leucogranite

4692 Leucogranite (foliated, with garnet)

Strongly banded and in some areas — biotite, biotite + pyroxene?, garnet biotite gneiss; mafic pyroxene gneiss and biotite ± garnet leucogneiss. At least some of the [redacted] garnet leucogneiss is migmatitic, but it is foliated. It [redacted] contains inclusions of many mafic gneisses, including brown charnockitic gneiss. Xanthic garnet biotite pegmatite are also present.

① Mt Henry

Massive reddish pyroxene qtz feldspar gneiss (grey in fresh H/S) — some evidence of retrogression — biotite etc. Pale minor garnet is present. The quartz commonly has a bluish color. Dip 005/65

Cut by a fresh dolerite dyke — trend 005 — undeformed

4693 Massive charnockitic gneiss

4694 massive charnockite gneiss with rare garnet

4695 Dolerite dyke

② Saddle near S end

Mostly massive brownish-red pyroxene/quartzofeldspathic gneiss with a higher proportion of interbanded mafic pyroxene gneiss, some black pyroxenite and some lighter coloured pyroxenite with bright green clinopyroxene.

2-3% garnet is also present.
The gneisses are cut by
numerous [illegible] feldspar/garnet/
biotite/magnetite pegmatites with
XLs up to 5 cms in length — they
are locally deformed. Near the [illegible]
pegmatites the gneisses are [illegible]
and retrogressed (biotite)
Dolerite dykes cutting the gneisses
do not appear to be cutting
the pegmatites (but relations are
not unequivocal). The dolerite
may be slightly altered but
appear to retain an igneous texture
Dip 000/near vertical.
4696 Massive hornblende gneiss
4697 Mafic pyroxene gneiss
4698 Pyroxenite (conformable)
4699 Dolerite dyke (sl altered?)

Gromov Nuks

(3)

Mostly rather massive, but layers rich pyroxene qtz feldspar gneiss + mafic pyroxene gneiss — the latter is quite abundant at the landing spot. Some more mafic & ultramafic layers contain quite abundant garnet — the mafic gneiss also contains garnet locally, mostly near rel mafic & ultramafic layers and segregations, but there is altogether typical pyroxene/feldspar gneiss (but it is always abundant)
Cut by fresh dolerite dyke
The gneisses are quite well foliated, but are otherwise similar to [illegible]

4??	Pyroxene quartz feldspar gneiss
4815	Mafic pyroxene gneiss
4816	Pyroxene/garnet gneiss
4817	Pyroxene/garnet/quartz feldspar rock
4818	Pyroxene/garnet rock
Dip	35°/30

[illegible]

(4) [illegible] summit

Similar to last locality –
massive charnockitic pyroxene gneiss
mafic pyroxene gneiss (locally with
garnet – especially in more melanocratic (generally)
layers). Cut by fresh dolerite
dykes – some shearing and
retrogression along margins. The
dykes are cut by pink to white
pegmatites with biotite + minor
muscovite and garnet. There is
considerable retrogression adjacent
to the pegmatites – the brown weathered gneiss becomes white or
light grey in outcrop (biotite replaces
pyroxene and/or garnet etc*) Some
of the pegmatites are composite with
cores of pink to white leuco granite [illegible] on
relatively shallow dipping [illegible].
Dip is 120/20 – [illegible]
[illegible] vertical and [illegible]
[illegible] to the [illegible]
[illegible] dip [illegible].
4819 massive charnockitic gneiss
* [illegible]

[illegible]

[illegible]

4822 Dolerite dyke (altered from near pegmatite)

<u>Central of 3 small h'ks on N.E end</u>

(5) Dip 000/65 Lineation 1?0/45

massive brown charnockitic gneiss with large grains. The latter were crossed to amphibolite adjacent to a large (3m) pegmatite (subhorizontal). The pegmatite contains muscovite, garnet (same as [illegible]) of very small X(s) — it is locally deformed but is mostly undeformed

4823 massive charnockitic pyroxene gneiss

4824 Amphibolite from near pegmatite

~~4825 Pegmatite [illegible]~~

Mt King 6/11/77

Baro	510	985	11.00
	864.65	864.85	−12°C

Emp Tie D /0558

Mt Pardoe – low outcrop on coast
(1) at W end (W of 2 outcrops)

Mostly fairly well layered brown pyroxene qtz feld gneiss; rusty weathering garnet qtz feld gneiss; gar + pyroxene gneiss major pyroxene gneiss, thin pyroxenite (cpyx?) layers. The latter have some garnet locally – mostly at cpyx / plag boundaries. The gneisses dip ~280/10 (variable) and are cut by a dolerite dykes and pink feld/qtz/biotite pegmatites (red in gneisses and bleaching of gneiss near contact – biotite developed

4825 garnet pyroxene qtz feld gneiss

Baro 1	510	985	1310.
Sea Level	995.84	996.12	+2°C

(2)

[illegible] pyroxene qtz feld gneiss –
[illegible] grained, [illegible] [illegible] appearance,
[illegible] [illegible] (could be [illegible])
Some development of garnet along shear
zones (bulk of rock does not appear
to contain garnet)
Cut by a metamorphosed dyke (80 cms)
(– trend 205) with garnet – undeformed
This is cut by a dolerite dyke
(fresh – trend 245).
Dip is ~ NE at a range of angles
4826 Pyroxene qtz feldspar gneiss
4827 Metamorphosed dyke (with garnet)

Samp R13/0419

Priestley Peak ([illegible])

(4) Dip 190/45 Lineation 270/10
Rather massive pyroxene qtz feld gneiss,
[illegible] pyroxene gneiss, [illegible]
feldspar [illegible] and [illegible]
[illegible] [illegible] garnet
[illegible] [illegible] [illegible] red

dykes with some garnet in. These are undeformed and cut the highly folded gneisses

4828, 9 metamorphosed dykes.

4830 Pyroxene granulite (any evidence of a 2nd metamorphism?)

4831 Rusty weathering garnet-qtz-fld gneiss

Baro	1510	985	1515
	946.60	946.87	0°C

Surp R15/0694

Mt Trail — Island to NW

①

Baro	510	985	0°C
	991.15	991.37	1543

Strongly layered leucocratic garnet-fld gneiss, mela-pyroxene gneiss, garnet-pyroxene gneiss, pyroxenite pods etc. The pyroxenites range from coarse black (some with garnet + some adjacent to felsic pyroxene gneiss) to pale buff + fine (some)

granite in shear deformation
Cut by pegmatites along shears
(or shearing along pegmatites?) and
garnet, biotite. Dolerite dykes
look fresh and undeformed.
4832 Leucocratic garnet gneiss (rather deformed)
4833 Garnet pyroxene rock (calc silicate)
4834 garnet biotite gneiss from shear zone
4835 Dolerite dyke
~~4836~~ 4836 Mafic 2 pyroxene granulite
The relationship between the ~~sh~~ dykes
and the pegmatites + shears not seen, but dyke
margins are essentially undeformed.
The shears have pegmatitic rocks
only locally, a few thin intraformational
garnet/biotite pegmatites are also
present.

Mt King
Theo 510 785 -10°C
263-394 264-25 1935

77070519 Mt Jewell - W pk on C ridge

Mt Cod. Run 15/3085

3862 Massive characteristic p/x qtz feld gneiss

77070520 Nbks N of Mt Scadden (11 mi) - W Nbk

✓ 3863 Altered p/x qtz feld gneiss

3864 Qtz rich garnet gneiss

77070521 Nbk NW of Budd Plc

Mt Cod R11/2373 270/45 = Rip

3865 Massive characteristic p/x qtz feld gneiss

3866 Mafic p/x gneiss (

77070522 S of Mt Ryder (3 mile Nbk)

Mt Cod R12/2345 095/80 = Rip

3867 Magnetite-rich, fine grained rock (lenses)

3868 Garnet ? biotite q/f feld gneiss (coarse)

3869 Mafic p/x gneiss

3870 Leucocratic garn q/f feld gneiss